

SOUTHWEST FISHERIES SCIENCE CENTER

SECOND QUARTER REPORT-FY 2003

For the Period January 1 - March 30, 2003

Submitted By: Lab Director/Division Director/Group Chief: John Hunter, Division Director, Fisheries Resources Division

Title of Accomplishment or Milestone: Stock assessment of the endangered white abalone in U.S. waters.

Current Status of Accomplishment or Milestone: White abalone were surveyed on Tanner Bank during a July cruise on the NOAA ship David Starr Jordan.

Background Information: The white abalone, *Haliotis sorenseni*, was listed as an endangered species on May 29, 2001. The white abalone recovery team has recommended surveys to determine the exact status of the species in the wild and to locate areas of suitable habitat for future enhancement of the population.

Purpose of Activity: To determine the status of white abalone in the wild and provide baseline data for recovering the population of this endangered species.

Description of Accomplishment and Significant Results: A nine day cruise on the R/V David Starr Jordan (Cruise 0207JD) was highly successful. White abalone were surveyed using a Remotely Operated Vehicle (ROV) and habitat was mapped using both multi-beam and side-scan sonar. A total of 194 adult white abalone were identified with the ROV and high resolution bathymetry was obtained for all of Tanner Bank shallower than 90m. Substrate type was assessed with side-scan sonar and all of the bottom shallower than 60 m was determined to be rock or rock covered with a thin layer of sediment. White abalone were found between 30 and 60 m on rock surfaces. The habitat area within that depth range was 1450 ha. The size distribution indicated that all abalone were adults.

Significance of Accomplishment: The amount of white abalone habitat mapped on Tanner Bank is greater than the previous estimates for all of California. Previous estimates of white abalone habitat have used an estimate of 3% of the sea floor between 25 and 65 m are rocky substrate resulting in a total rocky habitat of 752 ha between Pt Conception and the U.S.-Mexico border (Davis et al. 1998, Hobday and Tegner, 2000). This is a clear indication of how limited our knowledge is of underwater habitat in the EEZ.

White abalone were found at densities of about 18 ha⁻¹ and the population estimate for the bank is about 34,000 animals. The status review indicated a population of less than 2000. This low estimate is due in part to under estimation of the total habitat and in part due to low densities found near the mainland where the species is severely depleted.

Problems: None

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